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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,890	03/15/2004	Patrick Denis Lincoln	SRI/4804-2	1466

52197 7590 11/26/2007
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EXAMINER

NGO, NGUYEN HOANG

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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11/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/800,890

Applicant(s)

LINCOLN ET AL.

Examiner

Nguyen Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This communication is in response to the amendment of 10/16/2007. All changes made to the Claims have been entered. Accordingly, Claims 1-64 are currently pending in the application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11, 23-36, 48-64 are rejected under 35 U.S.C. 102(e) as being anticipated by Agarwal et al. (US 2004/0179486), hereinafter referred to as Agarwal.

Regarding claim 1, 26, 51, Agarwal discloses a method for detecting a substring of interest (packet) from a plurality of substrings (packets) that arrives out-of-order (method for segmentation, reassembly and inverse multiplexing of packets, abstract), comprising:

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receiving a substring with an index (receive a segment with SARId equal to 1 and also having F and L bits set, page 8 [0100]-[0101] and figure 12c);

determining whether a preceding span exists in a span set (if the F bit is set, as determined in step 12c-3, a new reassembly buffer is created, page 8[0101]). Examiner correlates preceding span to mean any previously received segments;

determining whether a succeeding span exists in said span set (if the L bit is not set, in step 12c-8, a search is made for the reassembly buffer and if no reassembly buffer is found, the segment is discarded. If the reassembly buffer is found, the segment data is appended to the buffer, page 8 [0101]); and

applying an automaton (algorithm, page 8 [0100]) having a list of substrings of interest to content of said substring to determine whether said substring matches one of said substrings of interest (packet determination, 12c-1, 12c-3 and 12c-6 of figure 12c). It should further be noted that Examiner broadly correlates this to 12C-8 of figure 12c as a search is made for a reassembly buffer (list of substrings of interest to content of said substring) and if a reassembly buffer is found (determine whether said substring matches substrings of interest), the segment data is appended to the buffer (page 8 [0101]).

Regarding claim 2, 27, 52, Agarwal discloses the method of claim 1, wherein if said preceding span and said succeeding span do not exist, then said substring is inserted into said span set (create new reassembly buffer, 12c-4 of figure 12c).

Regarding claim 3, 28, 53, Agarwal discloses the method of claim 1, wherein if said succeeding span does exist, then said substring is joined with said succeeding span to produce a join span (12c-8 of figure 12c).

Regarding claim 4, 29, 54, Agarwal discloses the method of claim 3, wherein said succeeding span is replaced by said join span (segment data is appended to the buffer, page 8 [0101]).

Regarding claim 5, 30, 55 Agarwal discloses the method of claim 1, wherein if said preceding span does exist, then said preceding span is joined with said substring to produce a join span (12c-8 or 12c-7 of figure 12c).

Regarding claim 6, 31, 56, Agarwal discloses the method of claim 5, wherein said preceding span is replaced by said join span (segment data is appended to the buffer, page 8 [0101]).

Regarding claim 7, 32, 57, Agarwal discloses the method of claim 1, wherein if said preceding span and said succeeding span do exist, then said preceding span is joined with said substring to produce a join span (12c-8 of figure 12c).

Regarding claim 8, 9, 33, 34, 58, 59, Agarwal discloses the method of claim 7, wherein

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said join span is joined with said succeeding span to produce a second join span (12c-8 of figure 12c).

Regarding claim 10, 35, 60, Agarwal discloses the method of claim 1, wherein said substring is forwarded, while parameters of said substring are stored (page 11 [0147]).

Regarding claim 11, 36, 61, Agarwal discloses the method of claim 10, wherein said parameters comprise at least one of a state of said automaton (F and L bit of figure 12c), said index (sequence number of figure 13b and 7b), a length of the substring (length of packet is defined and prepended to the packet, page 6 [0078]) and a prefix (headers, page 6 [0078]).

Regarding claim 23, 48, 62, Agarwal discloses the method of claim 10, further comprising:

determining whether said forwarded substring is subsequently dropped by a target machine (page 11 [0143]). Examiner correlates thus to determining if a frame/packet has been reassembled properly.

Regarding claim 24, 49, 63, Agarwal discloses wherein if said forwarded substring is subsequently dropped (corrupted packet), then a connection for passing said forwarded substring is reset (page 9 [0121]).

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Regarding claim 25, 50, 64, Agarwal discloses wherein said connection is a TCP connection (page 2 [0019]).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 12-22 and 37-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal et al. (US 2004/0179486), hereinafter referred to as Agarwal

Regarding claims 12-22, 37-47 Agarwal fails to specifically disclose that the method of detecting a substring of interest is performed as a network monitoring function as well as other specified function in claims 13-22. Agarwal however discloses of the need for users to expect packet delivery to be transmitted and received in the order in which they were sent (page 2 [0020]) and further discloses of bit error rates (page 2 [0016]). It

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would have thus been obvious to a person skilled in the art at the time the invention was made to have the method of segmentation, reassembly, and inverse multiplexing of packets, more specifically detecting a substring (segmented packet) of interest and what to do with detected segment, as disclosed by Agarwal be performed as a network monitoring function in order to ensure the proper delivery of packets from source to destination with little or no error. It should further be noted that claims 13-22 simply refer to different functions that the method may be performed by.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

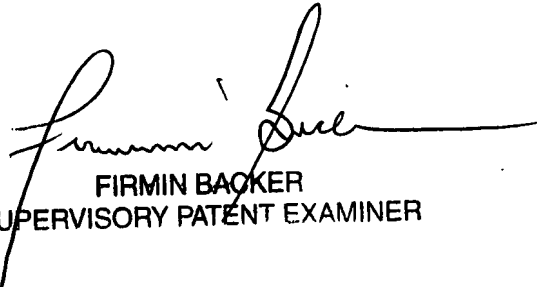
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N.

Nguyen Ngo

United States Patent & Trademark Office
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FIRMIN BACKER
SUPERVISORY PATENT EXAMINER

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